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1/24

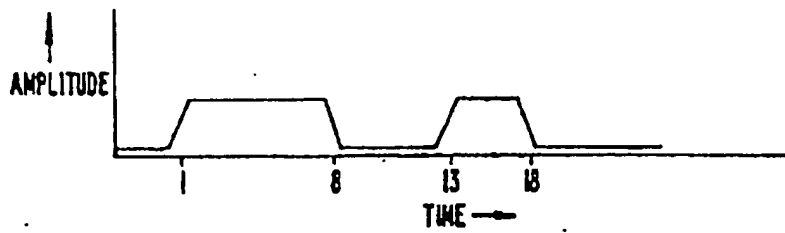


FIG. 1A (BACKGROUND)

2/24

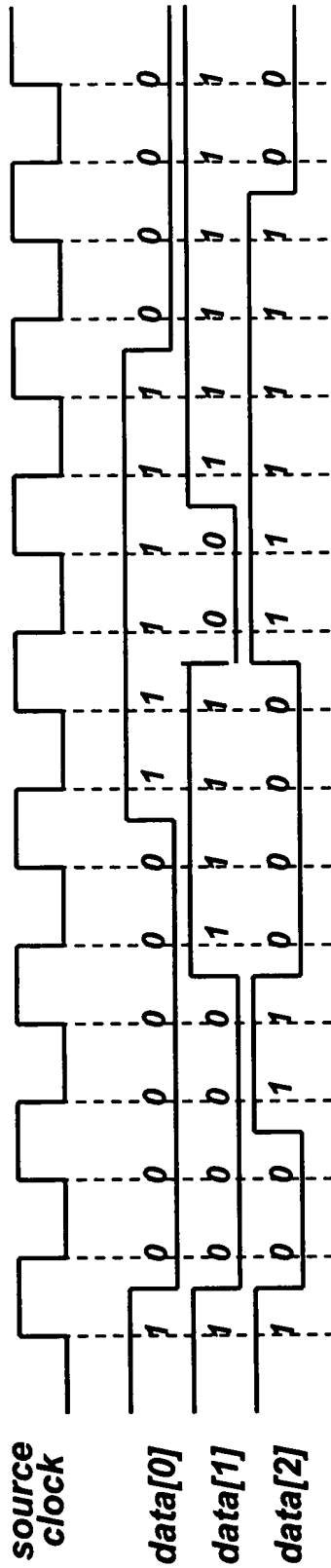


Fig. 1B (Background) Source Synchronous Data Bus

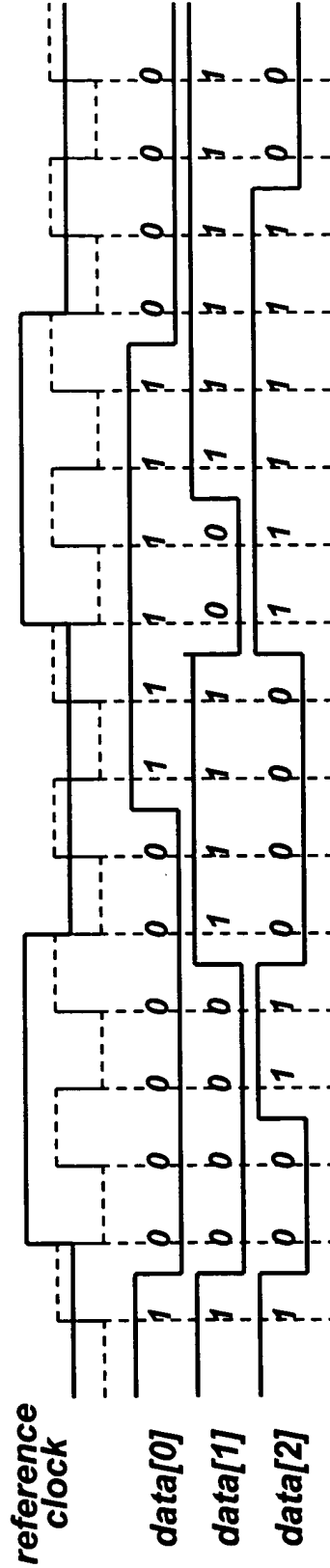
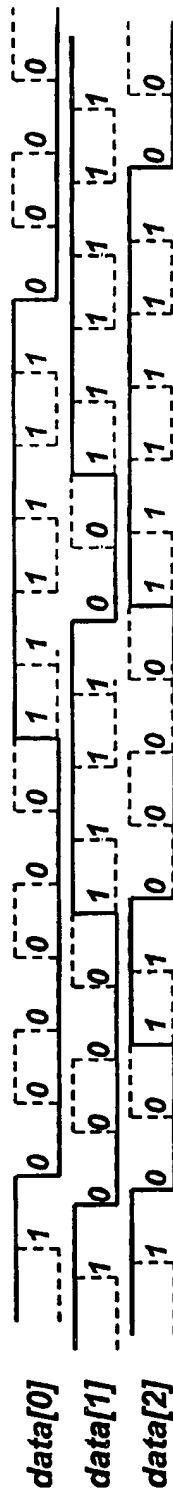


Fig. 1C (Background) Reference Clock Synchronous Data Bus

3/24



4/24

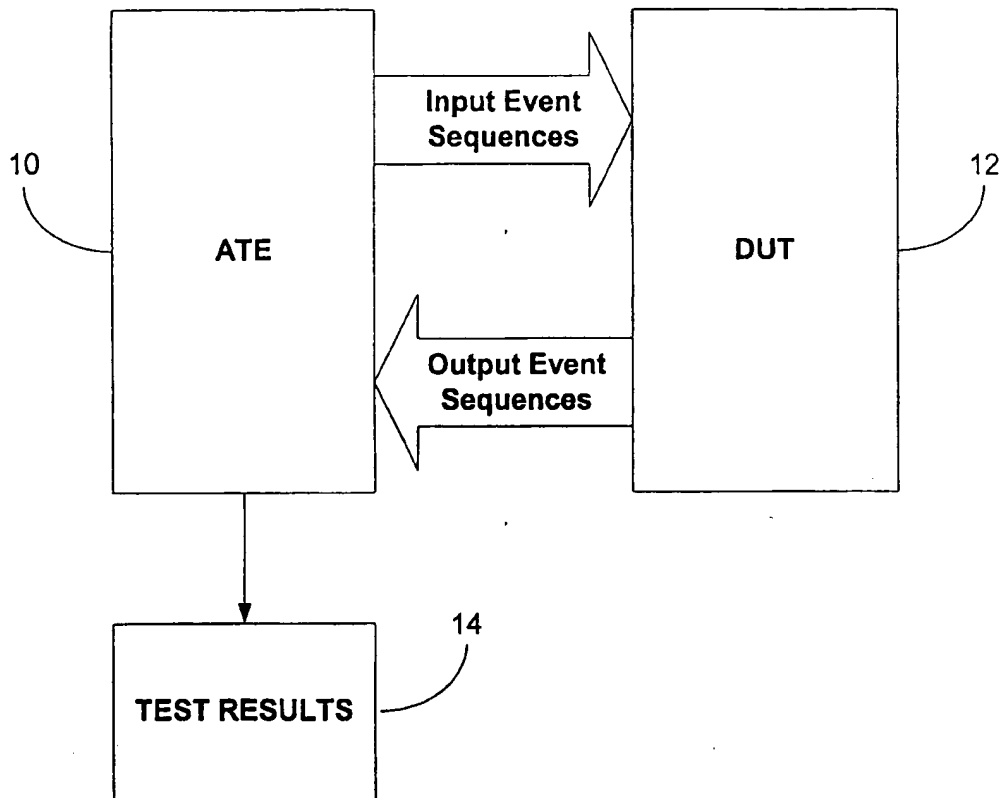


Figure 2

5/24

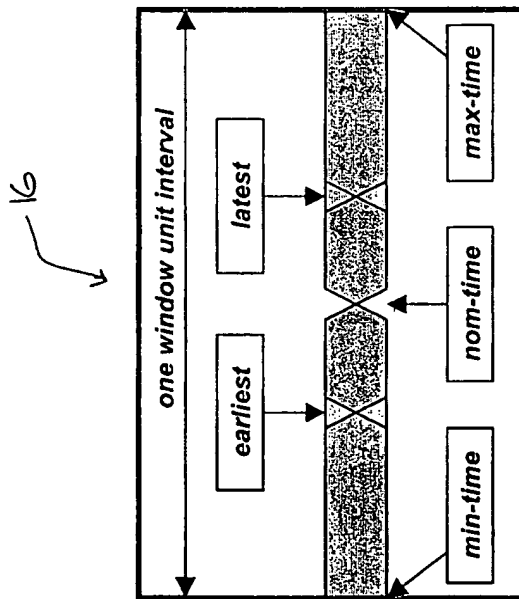


Figure 3

6/24

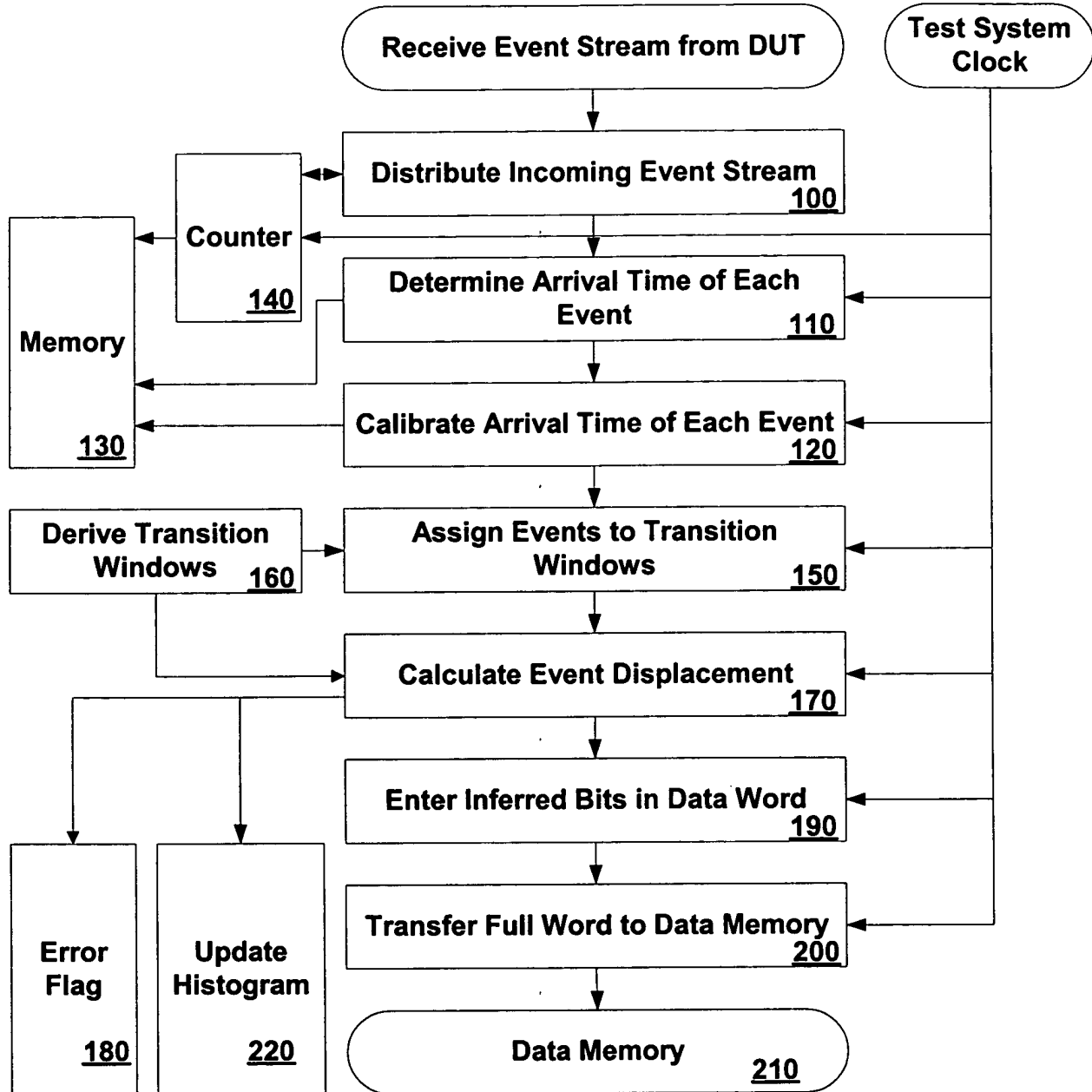


Figure 4

7/24

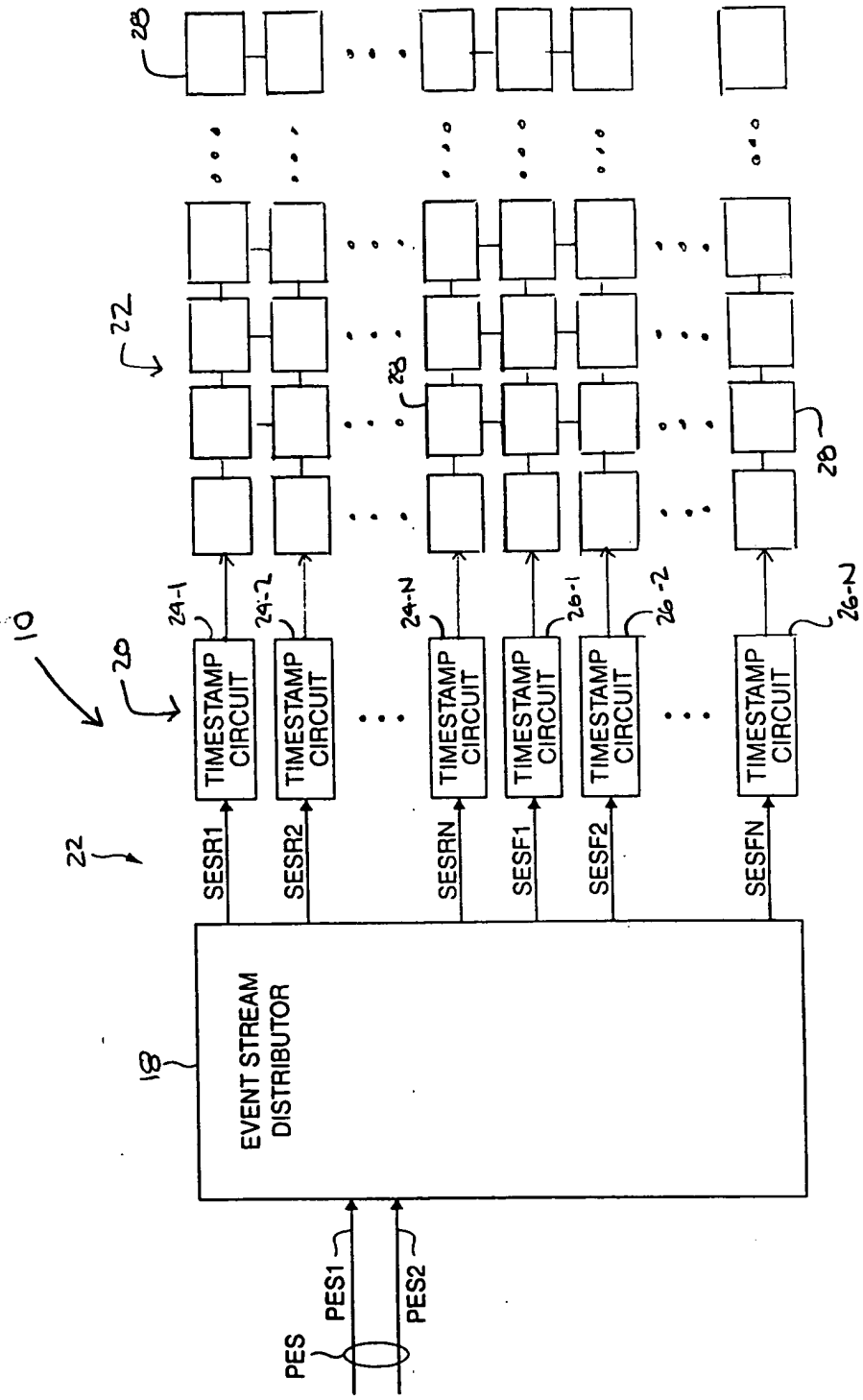


FIG. 5

8/24

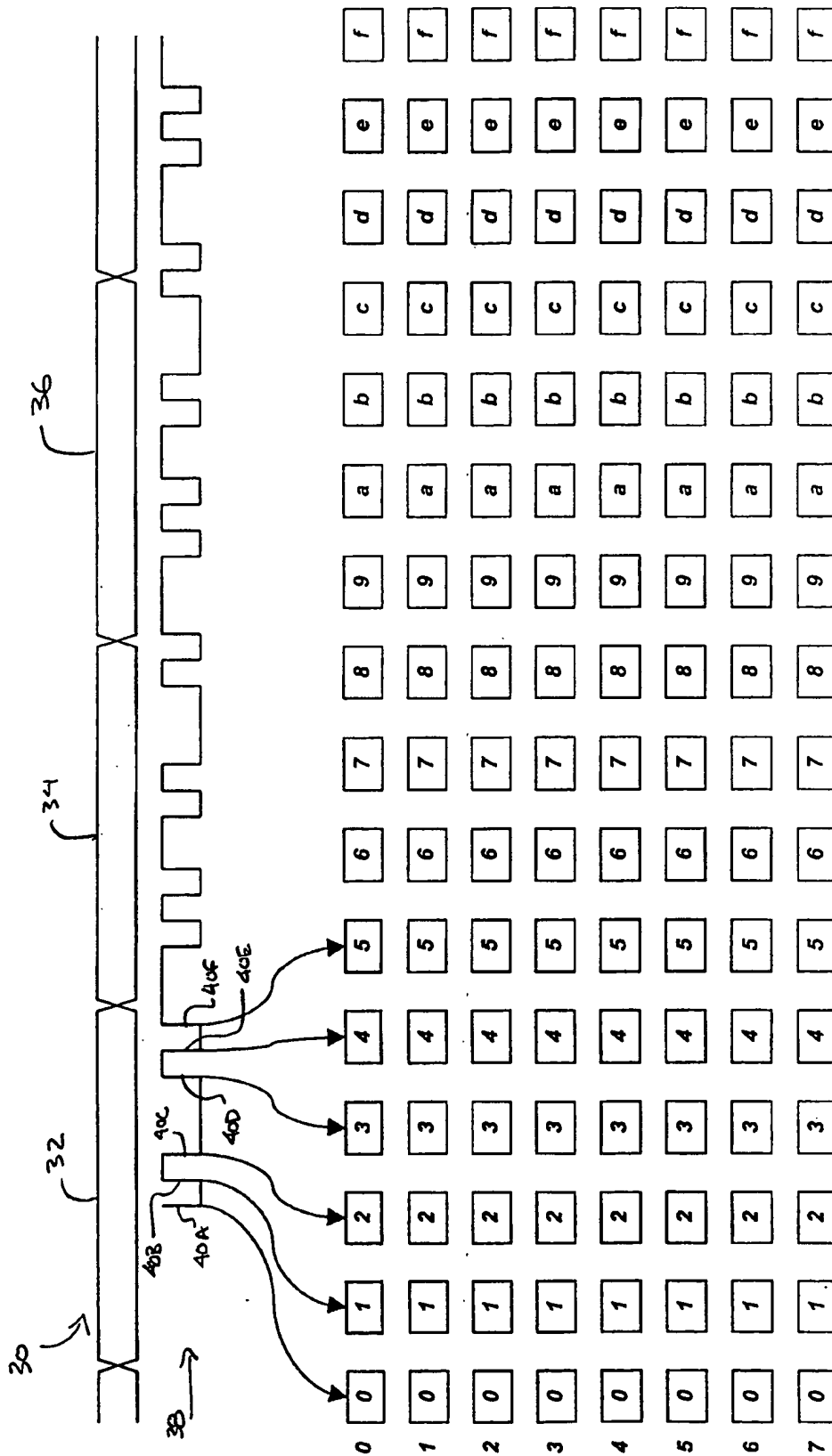
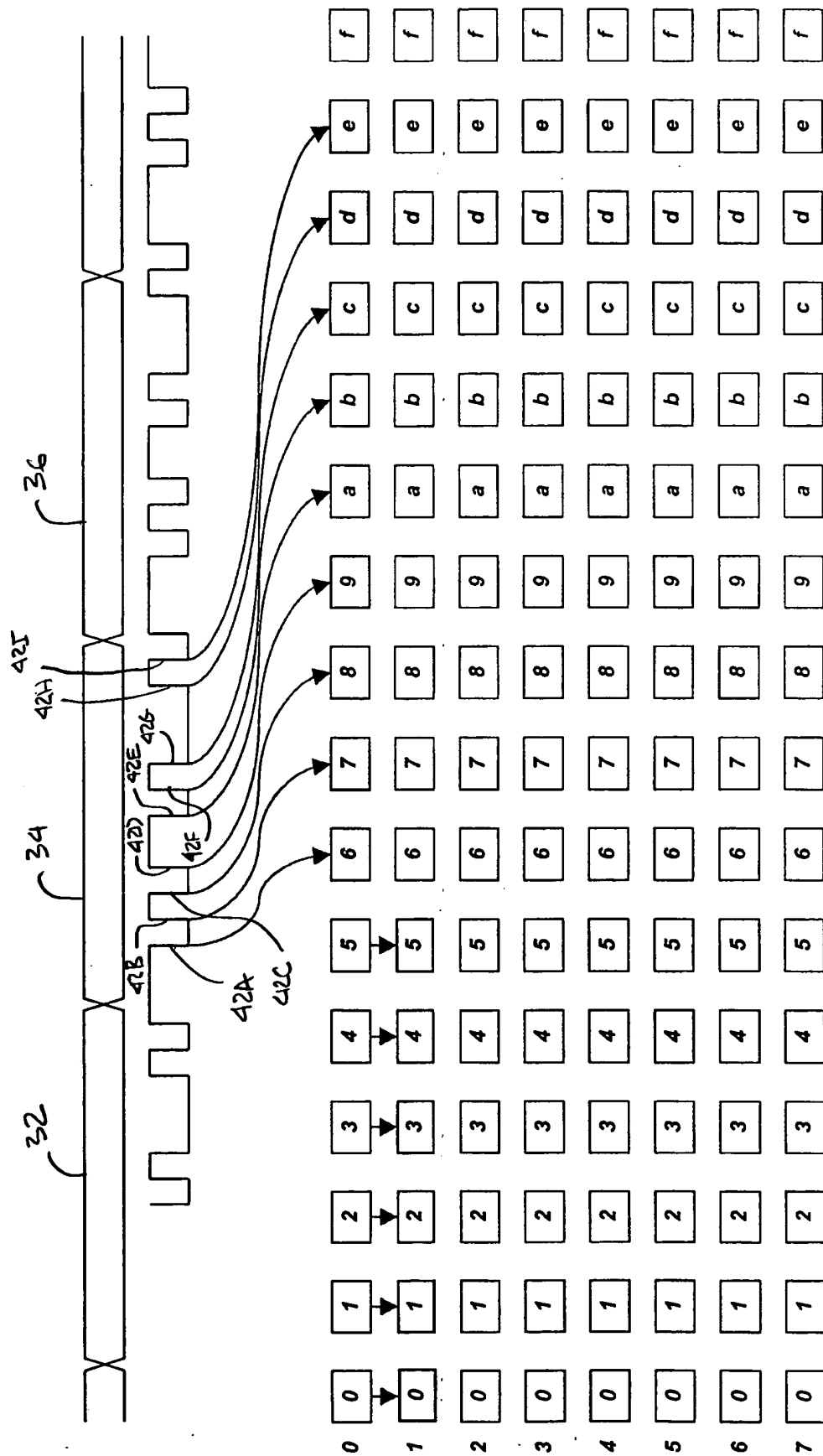
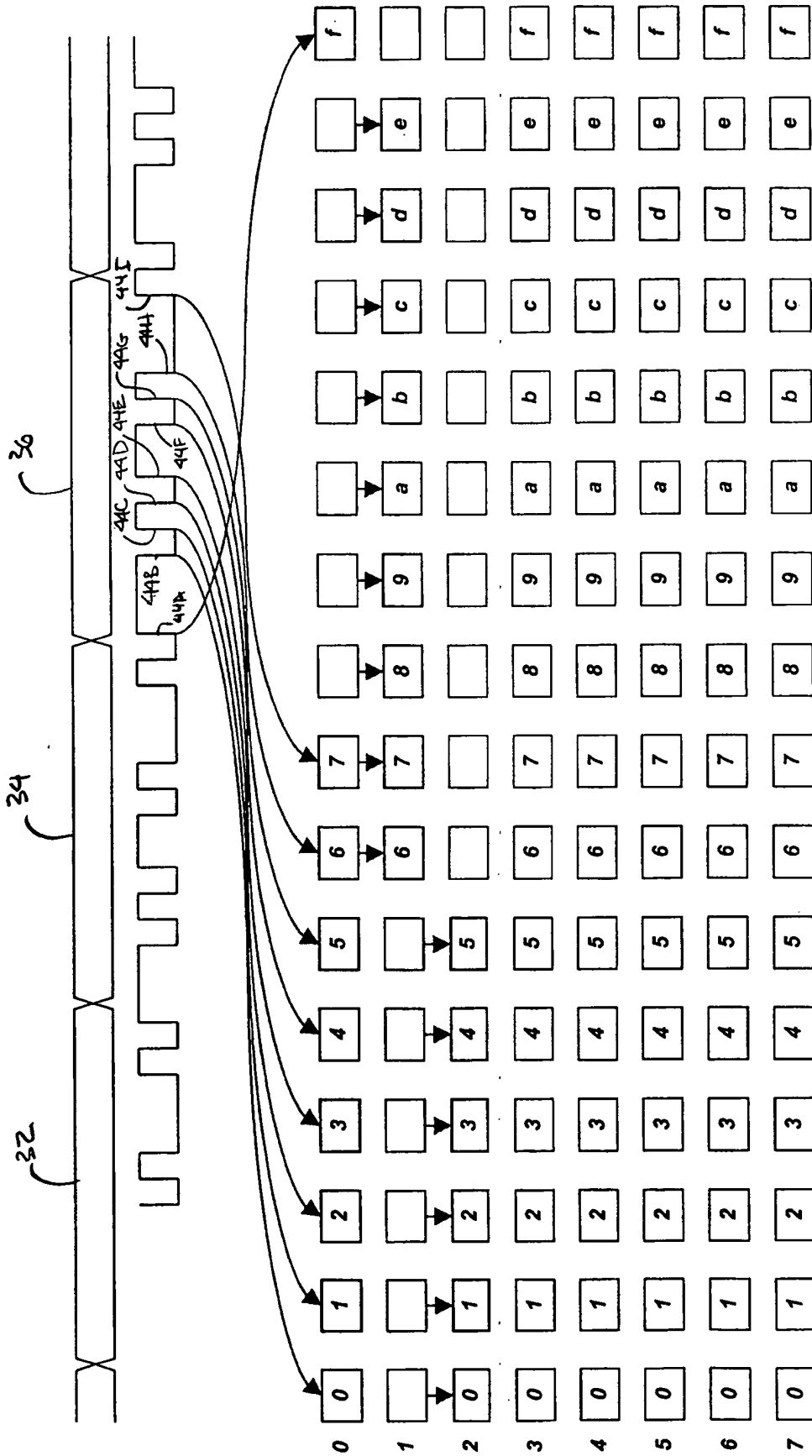


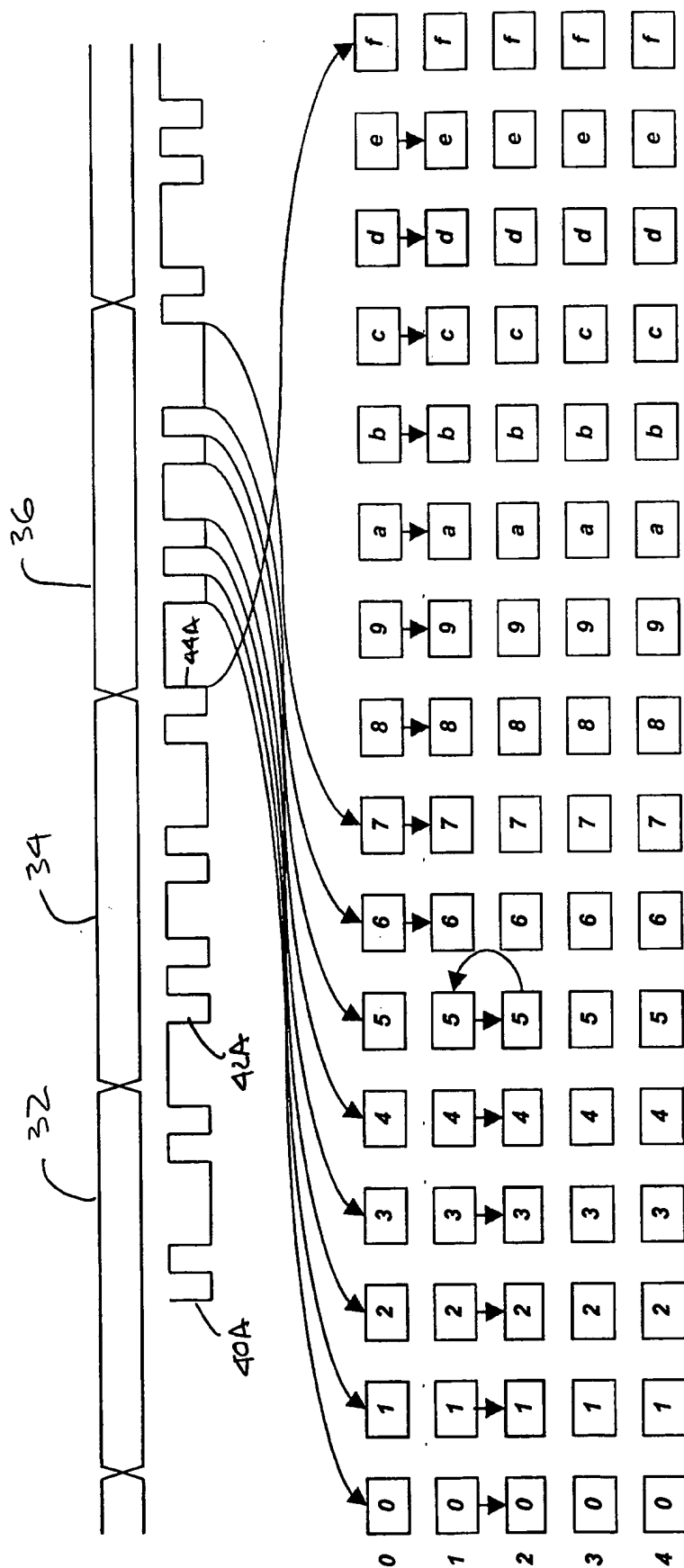
Figure 6A





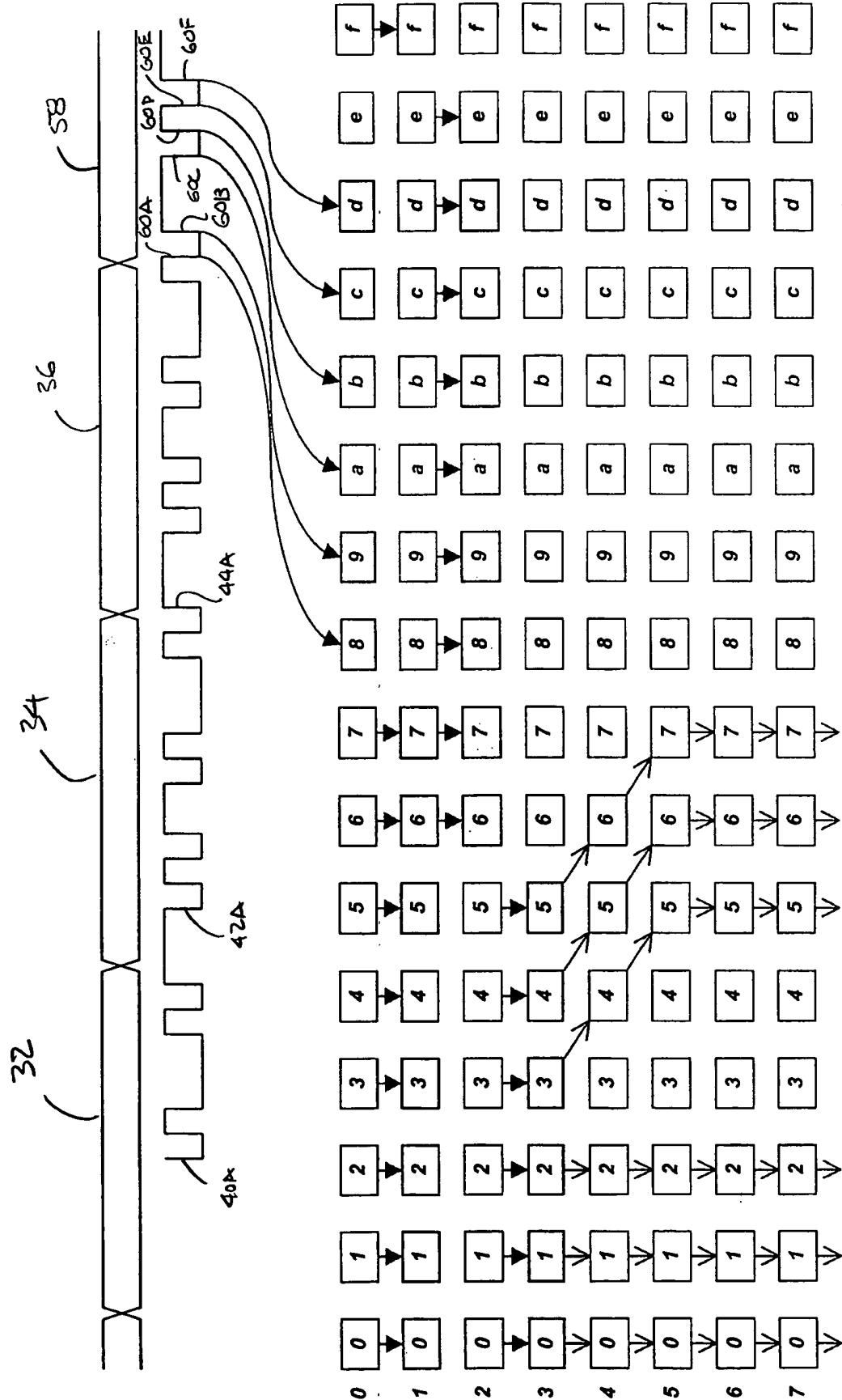
10/24

Figure 6C



11/24

Figure 6D





14/24

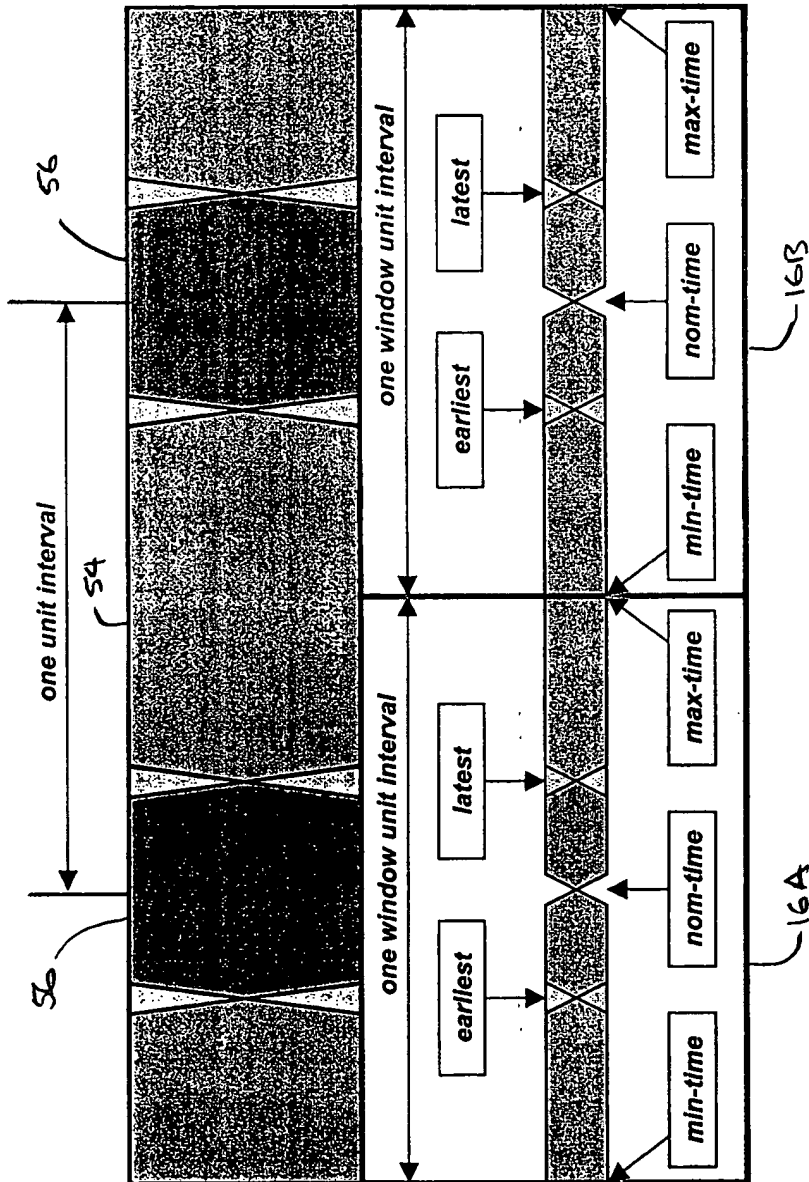


Figure 8

15/24

Change colored cells for operation		Channel Offset	Clock cycle after enable	Channel						Channel					
				Min	Norm	Max	Earliest	Latest	0	Min	Norm	Max	Earliest	Latest	1
Period(ps)	2500	32	0	0	32	63	24	40	40	64	96	127	88	104	104
Resolution	256		1	128	160	191	152	168	168	192	224	255	216	232	232
LSB(ps)	9.766		2	0	32	63	24	40	40	64	96	127	88	104	104
Rate(GBPS)	1.6		3	128	160	191	152	168	168	192	224	255	216	232	232
Margin	12.5%		4	0	32	63	24	40	40	64	96	127	88	104	104
UI NOM(LSB)	64		5	128	160	191	152	168	168	192	224	255	216	232	232
			6	0	32	63	24	40	40	64	96	127	88	104	104
			7	128	160	191	152	168	168	192	224	255	216	232	232
			8	0	32	63	24	40	40	64	96	127	88	104	104
			9	128	160	191	152	168	168	192	224	255	216	232	232
			10	0	32	63	24	40	40	64	96	127	88	104	104
			11	128	160	191	152	168	168	192	224	255	216	232	232
			12	0	32	63	24	40	40	64	96	127	88	104	104
			13	128	160	191	152	168	168	192	224	255	216	232	232
			14	0	32	63	24	40	40	64	96	127	88	104	104
			15	128	160	191	152	168	168	192	224	255	216	232	232
			16	0	32	63	24	40	40	64	96	127	88	104	104
			17	128	160	191	152	168	168	192	224	255	216	232	232
			18	0	32	63	24	40	40	64	96	127	88	104	104
			19	128	160	191	152	168	168	192	224	255	216	232	232
			20	0	32	63	24	40	40	64	96	127	88	104	104
			21	128	160	191	152	168	168	192	224	255	216	232	232
			22	0	32	63	24	40	40	64	96	127	88	104	104
			23	128	160	191	152	168	168	192	224	255	216	232	232
			24	0	32	63	24	40	40	64	96	127	88	104	104

FIG. 9A

16/24

pressed in LSB - TimeStamper ATE

clock cycle after enable	Channel					2					Channel					3					Channel					4				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest					
0	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
1	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
2	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
3	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
4	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
5	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
6	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
7	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
8	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
9	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
10	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
11	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
12	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
13	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
14	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
15	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
16	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
17	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
18	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
19	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
20	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
21	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
22	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					
23	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168	128	160	191	152	168	128	160	191	152	168					
24	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40	128	160	191	152	168	0	32	63	24	40					

FIG. 9B

17/24

clock cycle after enable	Channel					Channel					Channel				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest
0	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
1	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
2	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
3	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
4	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
5	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
6	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
7	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
8	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
9	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
10	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
11	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
12	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
13	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
14	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
15	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
16	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
17	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
18	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
19	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
20	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
21	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
22	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
23	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
24	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232

Pg. 9C

18/24

clock cycle after enable	Channel					Channel					Channel				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest
0	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
1	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
2	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
3	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
4	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
5	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
6	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
7	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
8	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
9	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
10	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
11	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
12	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
13	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
14	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
15	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
16	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
17	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
18	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
19	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
20	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
21	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
22	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
23	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
24	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168

Fig. 9D

19/24

clock cycle after enable	Channel					Channel					Channel				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest
0	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
1	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
2	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
3	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
4	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
5	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
6	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
7	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
8	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
9	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
10	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
11	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
12	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
13	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
14	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
15	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
16	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
17	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
18	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
19	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
20	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
21	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
22	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
23	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
24	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104

FIG. 9 E

20/24

clock cycle after enable	Channel 14					Channel 15					Channel 16				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest
0	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
1	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
2	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
3	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
4	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
5	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
6	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
7	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
8	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
9	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
10	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
11	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
12	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
13	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
14	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
15	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
16	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
17	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
18	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
19	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
20	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
21	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
22	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40
23	0	32	63	24	40	64	96	127	88	104	128	160	191	152	168
24	128	160	191	152	168	192	224	255	216	232	0	32	63	24	40

Fig. 9F

21/24

clock cycle after enable	Channel					Channel					Channel				
	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest	Min	Nom	Max	Earliest	Latest
0	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
1	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
2	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
3	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
4	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
5	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
6	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
7	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
8	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
9	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
10	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
11	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
12	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
13	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
14	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
15	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
16	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
17	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
18	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
19	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
20	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
21	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
22	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232
23	192	224	255	216	232	0	32	63	24	40	64	96	127	88	104
24	64	96	127	88	104	128	160	191	152	168	192	224	255	216	232

FIG. 9G

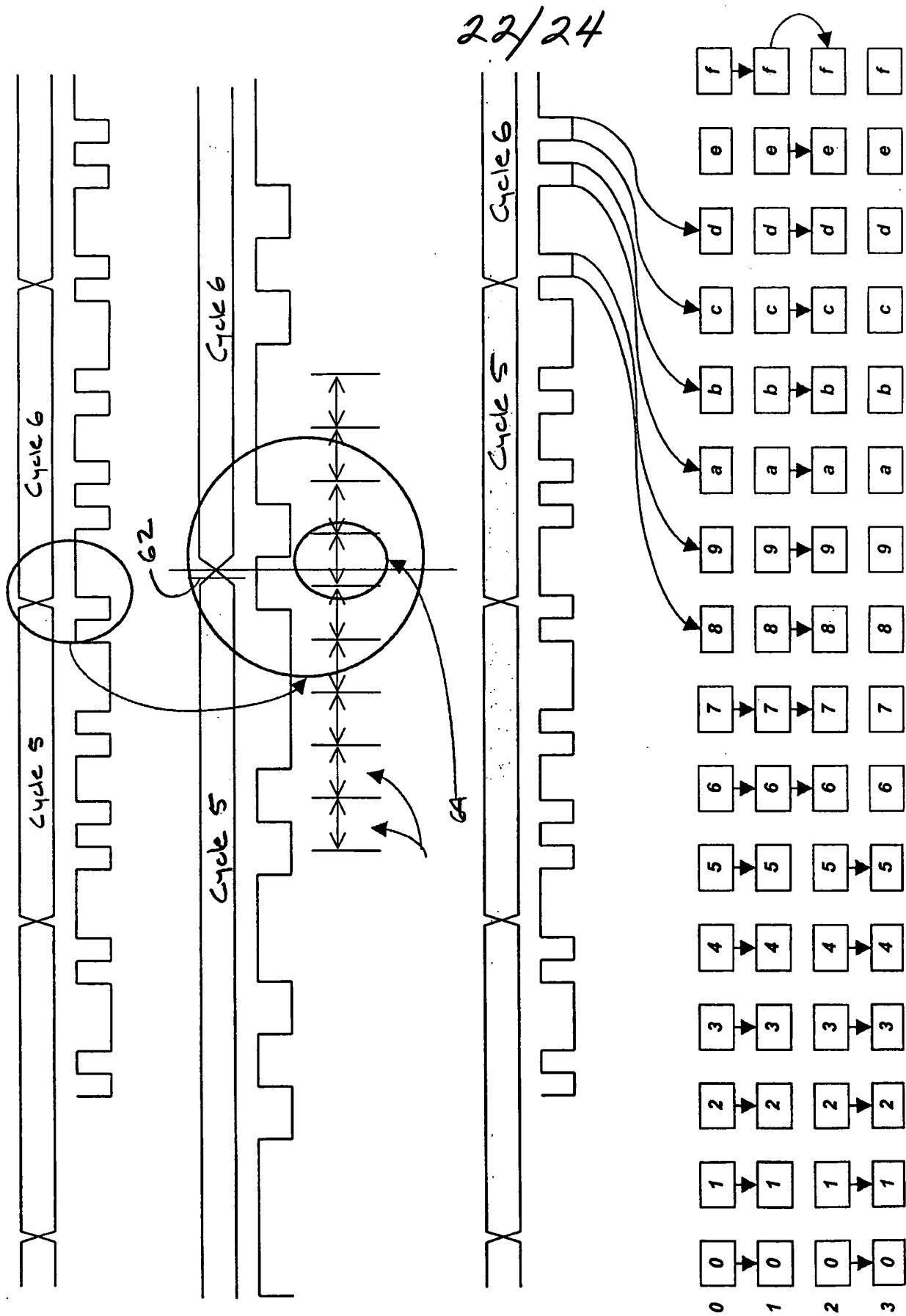


Figure 10

23/24

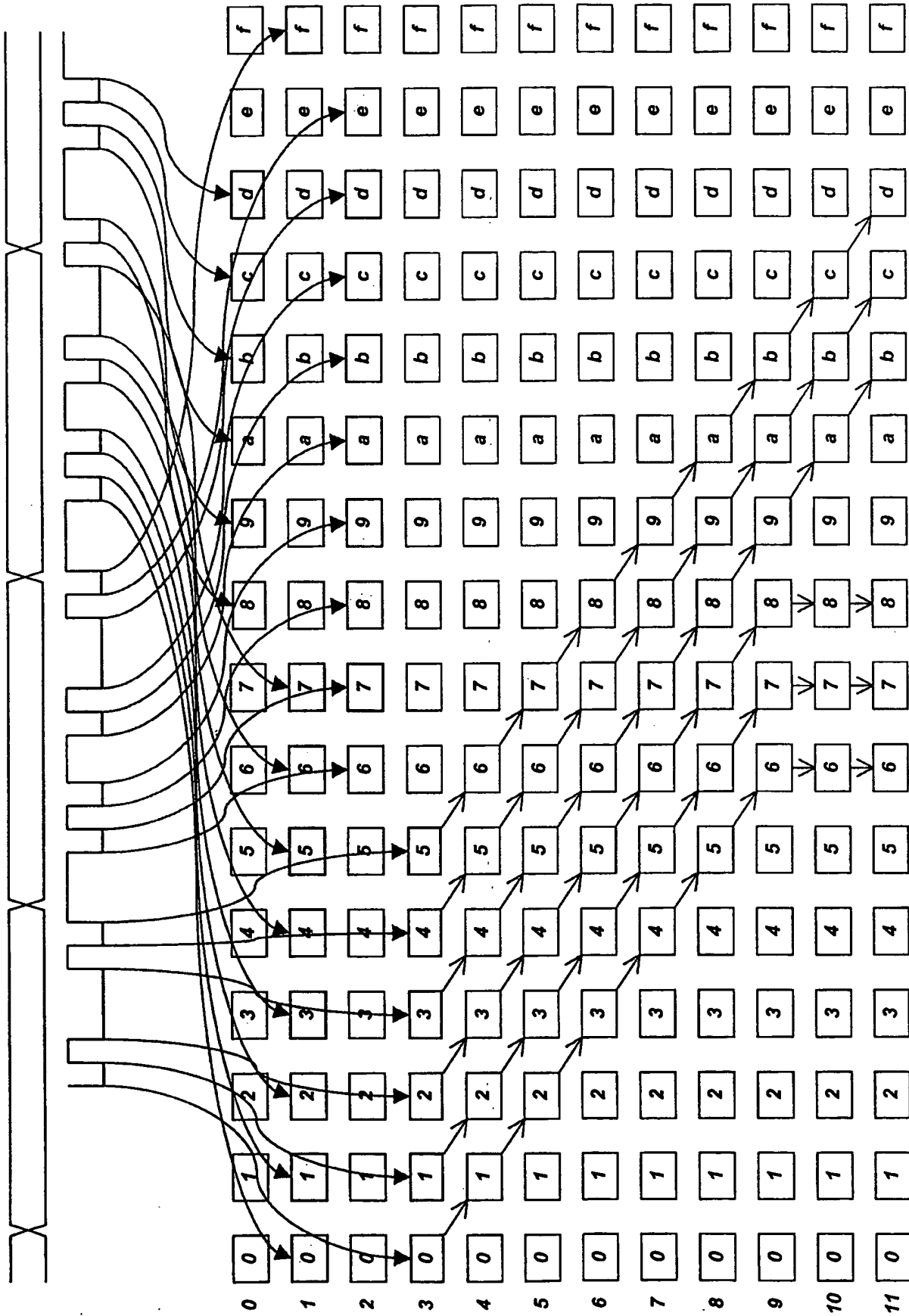


Figure 11A

24/24

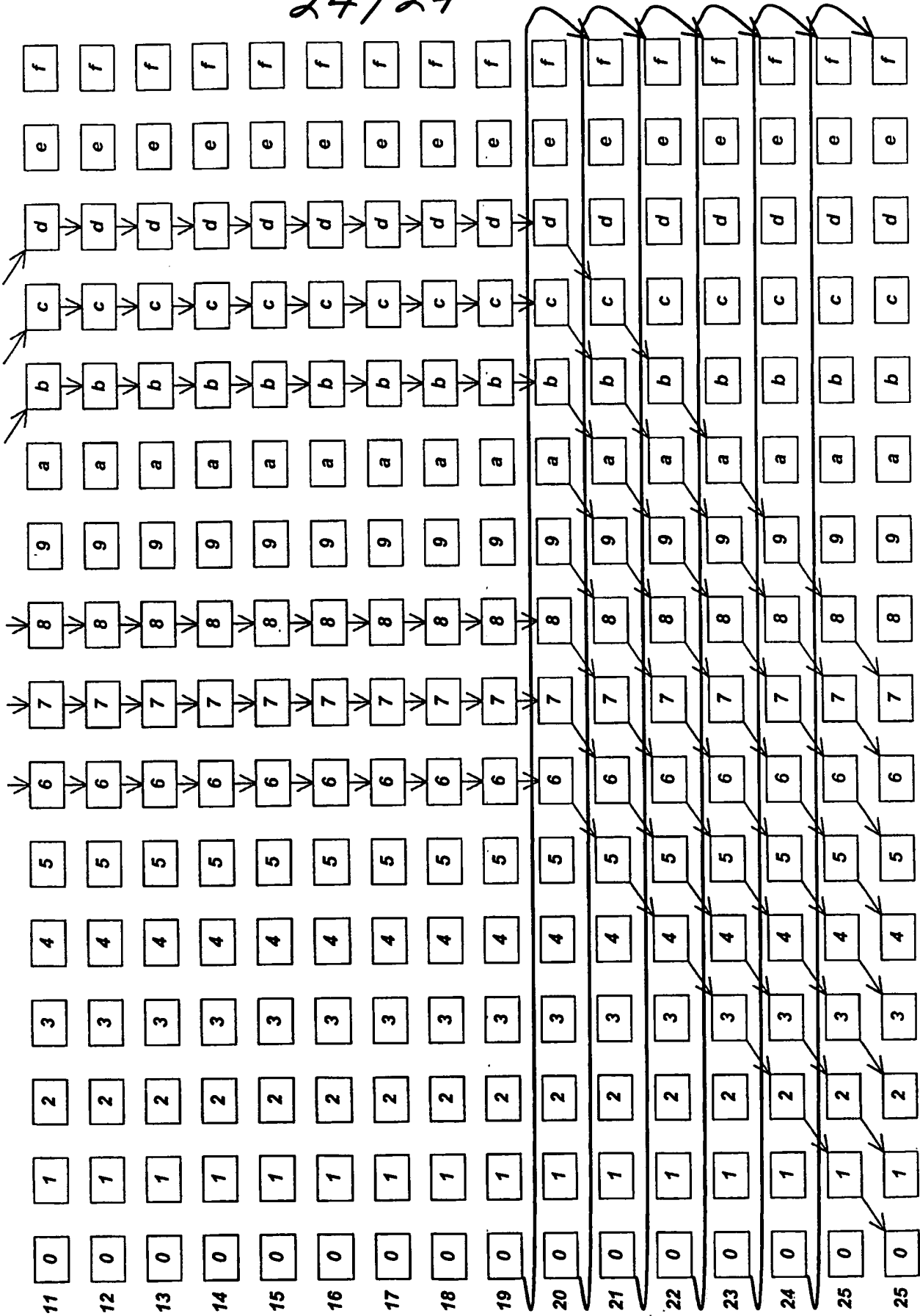


Figure 11B